CONTENTS VOL. 109, 1989

Research papers

The partial duration series method with a fixed number of peaks
T.A. Buishand (De Bilt, The Netherlands) 1
Detection of moisture stress by indicator plots — A simulation
R. Prasad (Bangalore, India). 11
Maximum entropy spectra for regional precipitation analysis and forecasting
N.R. Dalezios (Calgary, Alta., Canada) and P.A. Tyraskis (Dharhan, Saudi Arabia) . . 25
Storage–yield relationships for reservoirs by a sequential-operation algorithm and comparisons with Gould's probability matrix method
T. Haktanir (Adana, Turkey) 43
Field application of a finite-element water-quality model to a coal seam with UCG burns
D.N. Contractor (Tucson, Ariz., U.S.A.) and S.M.A. El-Didy (Giza, Egypt) 57
Weathering rates and $^{87}Sr/^{86}Sr$ ratios: an isotopic approach
G. Åberg, G. Jacks (Stockholm, Sweden) and P.J. Hamilton (North Ride, N.S.W., Australia) 65
Reverse water level fluctuations in semiconfined aquifer systems — "Rhade effect"
H.R. Langguth and C. Treskatis (Lohmar, F.R.G.). 79
A nonlinear equation for groundwater entry into well screens
S.R. Singh and S.K. Shakya (Ludhiana, India) 95
Relationships between the unsaturated electric and saturated hydraulic properties of soils
W.E. Kelly, T. Gorman and B. Curtis (Lincoln, Nebr., U.S.A.) 115
Relation of salinity and selensium in shallow groundwater to hydrologic and geochemical processes, western San Joaquin Valley, California
S.J. Deverel and S.K. Gallanthine (Sacramento, Calif., U.S.A.). 125
Distribution of groundwater seepage to large surface-water bodies: the effect of hydraulic heterogeneities
D.S. Cherkauer and D.C. Nader (Milwaukee, Wisc., U.S.A.) 151
Groundwater interaction with kettle-hole lake: relation of observations to digital simulations
D.S. Cherkauer and J.P. Zager (Milwaukee, Wisc., U.S.A.). 167
The influence of the overstory, understory and upper soil horizons on the fluxes of some ions in a mixed deciduous forest
A.G. Price (Toronto, Ont., Canada) and R.J. Watters (Brampton, Ont., Canada). . . . 185

Announcements 199

Research papers

Gravel transport in the braided Waimakariri river: mechanisms, measurements and predictions
M.A. Carson (Victoria, B.C., Canada) and G.A. Griffiths (Christchurch, New Zealand) 201
Regression models for estimating urban storm-runoff quality and quantity in the United States
N.E. Driver and B.M. Troutman (Denver, Colo., U.S.A.) 221
Groundwater chemistry and palaeorecharge in the Amadeus Basin, Central Australia
G. Jacobson (Canberra, A.C.T., Australia), G.E. Calf (Lucas Heights, N.S.W., Australia), J. Jankowski (Canberra, A.C.T., Australia) and P.S. McDonald (Alice Springs, N.T., Australia) 237

Geohydrological research in relation to radioactive waste disposal in an argillaceous formation
J. Patyn (Mol, Belgium), E. Ledoux (Fontainebleau, France) and A. Bonne (Mol, Belgium) 267

Groundwater's dynamic role in regulating acidity and chemistry in a precipitation-dominated lake
G.J. Kenoyer (Dayton, Ohio, U.S.A) and M.P. Anderson (Madison, Wisc., U.SA.). 287

Modeling solute transfer from soil to surface runoff: The concept of effective depth of transfer
R. Wallach (Rehovot, Israel), M. Th. van Genuchten and W.F. Spencer (Riverside, Calif., U.S.A. 307

A solution of the nonlinear Boussinesq equation for phreatic flow using an integral balance approach
R.N. Singh and S.N. Rai (Hyderabad, India) 319

A comparison of two hydrologic models for steeply sloping forested watersheds
A.Q. Khan and L.E. Ormsbee (Lexington, Ky., U.S.A. 325

Hydrochemical budgets for the Loch Dee experimental catchments, Southwest Scotland (1981–1985)
D.A. Farley and A. Werrity (Fife, U.K.) 351

Étude des transferts d'eau à l'interieur d'une formation morainique dans le bassin du Léman – Transfers d'eau dans la zone non saturée (Water transfers into glacial deposits of a watershed in the Geneva Lake basin – Water transfers in the unsaturated zone
S. Hamid, M. Dray, A. Ferhi, J.M. Dorioz (Thonon les Bains, France), M. Normand (Antony, France) et J. Ch. Fontes (Orsay, France) 369

Short Note

Physics versus mathematics in groundwater flow – A physical explanation of the minimum theorem in finite element calculations
W.H. van der Molen (Renkum, The Netherlands) 387

Announcement 389

Errata 391